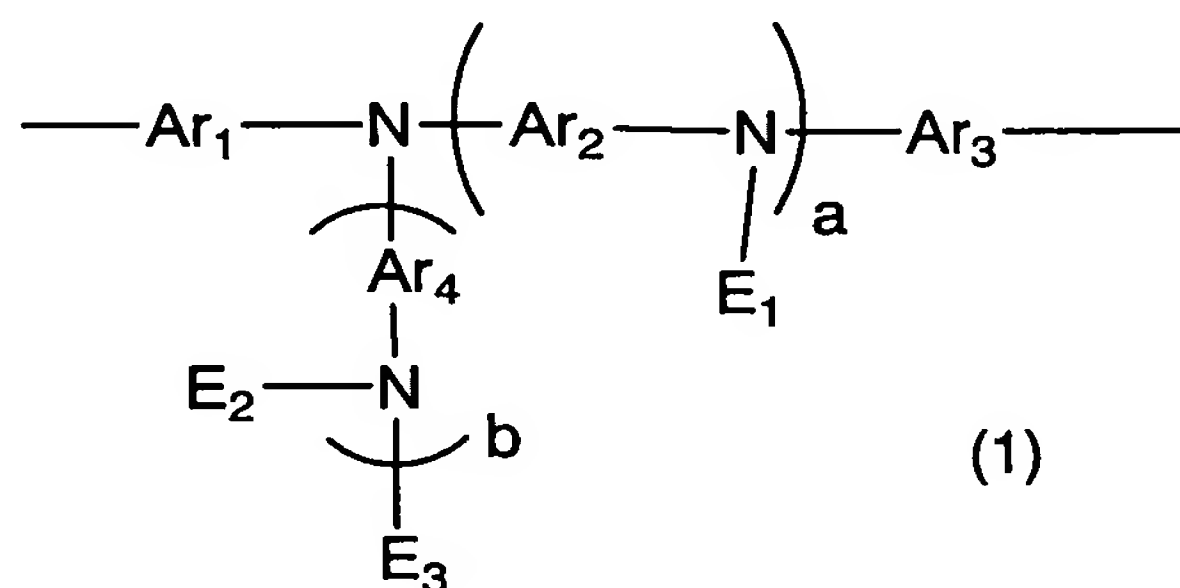


## CLAIMS

1. An organic electroluminescence device wherein a light emitting layer exists between electrodes composed of an anode and a cathode, a layer (L) comprising a polymer compound exists between the light emitting layer and the anode and the polymer compound comprises a repeating unit of the following formula (1):



(wherein, Ar<sub>1</sub>, Ar<sub>2</sub>, Ar<sub>3</sub> and Ar<sub>4</sub> represent each independently an arylene group or divalent heterocyclic group. E<sub>1</sub>, E<sub>2</sub> and E<sub>3</sub> represent each independently the following aryl group (A) or heterocyclic group (B). a and b represent each independently 0 or 1, and 0 ≤ a + b ≤ 1.

Aryl group (A): aryl group having three or more substituents selected from alkyl groups, alkoxy groups, alkylthio groups, aryl groups, aryloxy groups, arylthio groups, arylalkyl groups, arylalkoxy groups, arylalkylthio groups, arylalkenyl groups, arylalkynyl groups, amino group, substituted amino groups, silyl group, substituted silyl groups, silyloxy group, substituted silyloxy groups, monovalent heterocyclic groups

and halogen atoms,

Heterocyclic group (B): monovalent heterocyclic group having one or more substituents selected from alkyl groups, alkoxy groups, alkylthio groups, aryl groups, aryloxy groups, arylthio groups, arylalkyl groups, arylalkoxy groups, arylalkylthio groups, arylalkenyl groups, arylalkynyl groups, amino group, substituted amino groups, silyl group, substituted silyl groups, silyloxy group, substituted silyloxy groups, monovalent heterocyclic groups and halogen atoms and in which the sum of the number of the substituents and the number of hetero atoms of the heterocycle is 3 or more.).

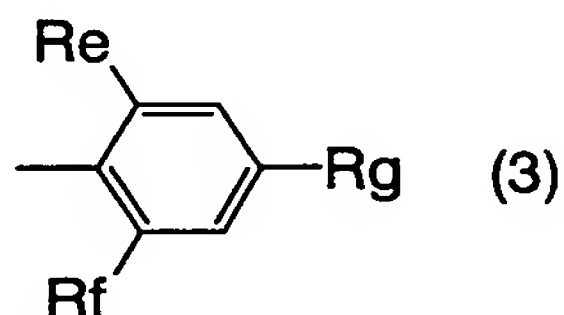
2. The organic electroluminescence device according to Claim 1 wherein the layer (L) comprising a polymer compound is adjacent to the light emitting layer.

3. The organic electroluminescence device according to Claim 1 or 2 wherein the layer (L) comprising a polymer compound is a hole injection and transportation layer.

4. The organic electroluminescence device according to Claim 1 or 2 wherein the layer (L) comprising a polymer compound is adjacent to a hole injection and transportation layer.

5. The organic electroluminescence device according to any of Claims 1 to 4 wherein the aryl group (A) is a phenyl group having three or more substituents, a naphthyl group having three or more substituents or an anthracenyl group having three or more substituents.

6. The organic electroluminescence device according to any of Claims 1 to 5 wherein the aryl group (A) is a group of the following formula (3):

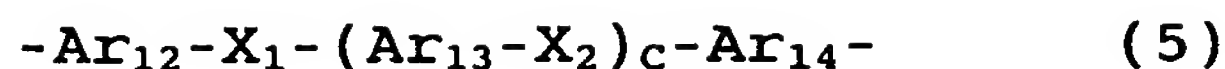


(wherein, Re, Rf and Rg represent each independently an alkyl group, alkoxy group, alkylthio group, aryl group, aryloxy group, arylthio group, arylalkyl group, arylalkoxy group, arylalkylthio group, arylalkenyl group, arylalkynyl group, amino group, substituted amino group, silyl group, substituted silyl group, silyloxy group, substituted silyloxy group, monovalent heterocyclic group or halogen atom.).

7. The organic electroluminescence device according to Claim 6 wherein, in the formula (3), Re and Rf represent each independently an alkyl group having 3 or less carbon atoms, alkoxy group having 3 or less carbon atoms or alkylthio group having 3 or less carbon atoms and Rg represents an alkyl group having 3 to 20 carbon atoms, alkoxy group having 3 to 20 carbon atoms or alkylthio group having 3 to 20 carbon atoms.

8. The organic electroluminescence device according to any of Claims 1 to 7 wherein the polymer compound comprises a repeating unit of the following formula (4), (5), (6) or (7) in addition to a repeating unit of the formula (1):





(wherein,  $\text{Ar}_{12}$ ,  $\text{Ar}_{13}$  and  $\text{Ar}_{14}$  represent each independently an arylene group, divalent heterocyclic group or divalent group having a metal complex structure.  $\text{X}_1$  represents  $-\text{CR}_2=\text{CR}_3-$ ,  $-\text{C}\equiv\text{C}-$  or  $-(\text{SiR}_5\text{R}_6)_d-$ .  $\text{X}_2$  represents  $-\text{CR}_2=\text{CR}_3-$ ,  $-\text{C}\equiv\text{C}-$ ,  $-\text{N}(\text{R}_4)-$  or  $-(\text{SiR}_5\text{R}_6)_d-$ .  $\text{R}_2$  and  $\text{R}_3$  represent each independently a hydrogen atom, alkyl group, aryl group, monovalent heterocyclic group, carboxyl group, substituted carboxyl group or cyano group.  $\text{R}_4$ ,  $\text{R}_5$  and  $\text{R}_6$  represent each independently a hydrogen atom, alkyl group, aryl group, monovalent heterocyclic group or arylalkyl group.  $c$  represents an integer of 0 to 2.  $d$  represents an integer of 1 to 12. When a plurality of  $\text{Ar}_{13}$ s,  $\text{R}_2$ s,  $\text{R}_3$ s,  $\text{R}_5$ s and  $\text{R}_6$ s are present, these may be the same or different.).

9. The organic electroluminescence device according to any of Claims 1 to 8 wherein the polymer compound comprises at least one polymerizable substituent in the molecule.

10. A sheet light source using the organic electroluminescence device according to any of Claims 1 to 9.

11. A segment display using the organic electroluminescence device according to any of Claims 1 to 9.

12. A dot matrix display using the organic electroluminescence device according to any of Claims 1 to 9

as back light.

13. A liquid crystal display using the organic electroluminescence device according to any of Claims 1 to 9 as back light.